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10/650,464	08/28/2003	Shawn P. Keeney	WHLK/043	7110

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EXAMINER

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/650,464
Filing Date: August 28, 2003
Appellant(s): KEENEY ET AL.

Kin-Wah Tong
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed August 11, 2006 appealing from the Office action mailed 1/13/2006.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

The following are the related appeals, interferences, and judicial proceedings known to the examiner which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal:

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

This appeal involves claims 1-16.

Claim 17 has been canceled.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

5,896,092	Bechtel	04-1999
6,078,269	Markwell et al.	06-2000
4,578,586	Preston	03-1986
4,625,151	Kataoka	11-1986
6,091,898	Hata	7-2000

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 4-5, 7-9 and 11-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bechtel [US 5,896,092] in view of Markwell et al. [US 6,532,406; Markwell].

Regarding to claim 1: Bechtel teaches an alarm unit, comprising:

-a flashing circuit having a flashtube for generating a flash; and an integrated circuit U1 coupled to said flash circuit, for triggering said flash [as shown in Fig. 7, col. 11, lines 19-50 and col. 12, lines 58-67 to col. 13, lines 1-12]. Depending upon the usage of (application) of the alarm system (i.e., specific voltage range at a specific mode operating and specific flash rate) the integrated circuit (U1) must met the specific require specification of the application. If one uses

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Bechtel's U1 for any other application beside this flashtube alarm unit, as disclosed U1 may not operate properly. Therefore, the Bechtel's U1 would be obviously to be an ASIC. Nevertheless, Bechtel does not specifically disclose that U1 is an application specific integrated circuit (ASIC). ASIC is a known term for an IC chip that customized for a specific application, such as, controlling fire alarm's light. Markwell teaches an alarm unit 20 using an application specific integrated circuit (ASIC) 35 for triggering/controlling the flashing pattern alarm 51 [as shown in Fig. 1, 3 and col. 4, lines 10-33]. It would have been obvious of one having ordinary skill in the art at the time of the claimed invention was made to use a customized form of the ASIC chip as suggested by Markwell for the integrated circuit (U1) of Bechtel, so that the IC chip performs the specific application of Bechtel's fire indication.

Regarding to claims 4-5: Bechtel further discloses a current limiting circuit (R1, Q3, R17 and Q5) coupled to the integrated circuit U1, for constantly senses and limiting an input current level [as cited in Fig. 7, col. 12, lines 15-20, 57-67].

Regarding to claims 7-9: Bechtel and Markwell made of obvious in claim 1 above, Markwell does not specific show that the ASIC is an 18-pin, 16-pin or 8-pin package. Since, the ASIC chip capable to control multiple components, it would have been an obvious to one having ordinary skill in the art to have more/less pins on the chip as require for each specific alarm unit, including 18-pin, 16-pin or 8-pin.

Regarding to claim 11: Bechtel and Markwell made of obvious in claim 1 above, they are not specify that the ASIC provides a charge cycle that is greater than 8 Khz. However, as long as the flash circuit is being generated and the flashtube is being flashed, employing any frequency range for performing the same function would not constitute an inventive step but an

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obvious of design choice. Therefore, it would have been obvious of one having ordinary skill in the art at the time of the claimed invention to employ any known frequency range, such as greater than 8 Khz. to charging the flashtube as desired.

Regarding to claim 12: Bechtel and Markwell made of obvious in claim 1 above, Bechtel further teaches an audio circuit can be incorporated in the system [see col. 15, lines 59-63].

Regarding to claim 13: Bechtel and Markwell made of obvious in claim 11 above, Bechtel further teaches that a pizzo horn circuitry can be incorporated in each strobe unit [col. 15, lines 59-63]. Thus, it would have been obvious to one having ordinary skill in the art to recognized that the audio frequency for said audio warning signal would be selected as the system is selected frequency for flashtube.

Regarding to claim 14: Bechtel and Markwell made of obvious in claim 1 above, except for not specifically show a synchronization detection circuit for trigger said flash. Bechtel shows a circuit includes (D1, R15, R17, Q5 and C4) that senses the input signal current and trigger flash [see Fig. 7, col. 13, lines 1-13], which constitutes a synchronization detection circuit.

Regarding to claim 15: Bechtel and Markwell made of obvious in claim 1 above, Bechtel further discloses that transistor drive Q5 capability of greater than 7.3 volts [see col. 13, lines 5-8].

Regarding to claim 16: Bechtel teaches an alarm unit, comprising:
-a pizzo horn circuitry for generating an audio warning signal [see col. 15, lines 59-63], wherein the audio warning device is incorporated in the strobe unit, and an integrated circuit U1

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coupled to said pizzzo horn circuit, for triggering said audio [as shown in Fig. 7], since, both visually alarm and audible alarm are incorporated in the same system, the U1 activates/selects visually alarm and/or audible alarm, and flash/audio frequency is inherently selected in the unit, depending upon the usage of (application) of the alarm system (i.e., specific voltage range, a specific mode operating and specific audio frequency) the integrated circuit (U1) must met the specific require specification of the application, if one uses Bechtel's U1 for an application other than Bechtel's flashtube alarm unit, the U1 may not operate properly, thus Bechtel's U1 is an application specific integrated circuit (ASIC) for this specific flashtube alarm unit (14), Bechtel does not specifically disclose that U1 is an application specific integrated circuit (ASIC). Since, (ASIC) is a known name for an IC chip that customized for a specific application, such as, controls alarm's light, Markwell teaches an alarm unit 20 comprises an application specific integrated circuit (ASIC) 35 for triggering/controlling the audio alarm 56 [as shown in Fig. 3, col. 11, lines 55-59]. It would have been obvious of one having ordinary skill in the art at the time of the claimed invention, to implement a known form of the ASIC chip as suggested by Markwell in the integrated circuit (U1) of Bechtel, so that the IC chip of that specific application is easy to recognize by the user. In addition, since both references are in the same application and environment they are perfectly combinable.

3. Claims 2-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bechtel in view of Markwell, and further in view of Preston [US 4,578,586].

Regarding to claims 2-3: Bechtel and Markwell discloses all the limitations as described above, Markwell further teaches ASIC is also operable to vary the LED flash pattern

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[col. 9, lines 23-25], but lack of specifically shows a switch coupled to the ASIC having a plurality of selectable positions representative of flash intensity. Preston teaches an alarm device comprises switch 180 for setting light/horn intensity [as shown in Fig. 5, lines 36-38]. It would have been obvious of one having ordinary skill in the art at the time of the claimed invention, to implement an intensity settings switch as suggested by Preston into the combination above, for the purpose of easy and safety, since the switches limited current to the light/horn.

4. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bechtel in view of Markwell and further in view of Kataoka [US 4,625,151].

Regarding to claim 6: Bechtel and Markwell made of obvious above, they are not specific suggesting a DC to DC converter in the system, Kataoka teaches a flash device which comprising a DC to DC converter (3) coupled to an IC circuit [as shown in Fig. 1, col. 2, lines 20-25]. It would have been obvious of one having ordinary skill in the art at the time of the claimed invention to employ a DC to DC converter as suggested by Kataoka, into the system of combination above, for the purpose of regulating and stabilizing the voltage supply to IC, since flash tube would use more power when flashing, and after a flash the voltage drop to minimum.

5. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bechtel in view of Markwell and further in view of Hata [US 6,091,898].

Regarding to claim 10: Bechtel and Markwell made of obvious in claim 1 above, they are not specifically teaching that the flash circuit comprises a voltage doubler. It is known in the art that, voltage doubler is use for boosting voltage of flash circuit, Hata teaches a flash

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circuit 37 which comprises a voltage doubler 85, [as shown in Fig. 4, col. 14, lines 43-48, col. 15, lines 10-15]. It would have been obvious of one having ordinary skill in the art at the time of the claimed invention to implement the voltage doubler as suggested by Hata, into the system of combination above, in order to provide an available power to the flash circuit.

(10) Response to Argument

Regarding remarks filed with the Brief, on page 6 appellant argues that Markwell's indication alarm 51 is only limited to an LED and not a flashtube and the flashtube and the LED is not interchangeable, because the requires trigger voltage is different.

As set forth previously in the rejections of claim 1, Bechtel's IC chip is specifically for generating the specific flash rate to a specific flashtube alarm (as shown in Bechtel's specification, specifically at col. 11, lines 19-65], Markwell's ASIC chip used in the rejection merely to demonstrate the well known concept of ASIC. It's not to replace physically Bechtel's IC chip with ASIC of Markwell, Bechtel's IC chip is specific integrated circuit which designed for a specific application (i.e. fire flashtube alarm indication). Therefore, it would have been obvious of one ordinary skill in the art to use well known ASIC as taught by Markwell in Bechtel's system for flashtube alarm indication in fire condition.

Regarding to appellant argues of dependent claims 4-5 which comprising a current limiting circuit.

As set forth in the previously rejection, Bechtel discloses a current limiting circuit (R1, Q3, R17 and Q5) [as shown in Fig. 7, col. 12, 13 and 14], that coupled to the IC chip.

Regarding to appellant argues of dependent claims 7-9 which comprising an eighteen-pin package and sixteen-pin package. As set in the previous rejection that Markwell shows an ASIC

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chip of Fig. 3, but does not specifically mention of how many pin in that ASIC chip package, however, an ASIC chip is designability as large or small with more/less pins for a specific application, which obvious of one having ordinary skill in the art to design an ASIC chip that has 8-pin, 16-pin or 18-pin package according to specification of an intended application.

Regarding to appellant argues of dependent claim 11, comprising a charge cycle that greater than 8 kilohertz. The flashtube is being flashed depend on to the value of a charge cycle which can be designed depend on the user intended (such as, fast or slow). Therefore, it would have been obvious that any appropriate charging cycle frequency can be used as flash rate as user desired, including a charge cycle that greater than 8 kilohertz as claimed.

Regarding appellant argues of dependent claims 12-13, which comprising an audio warning such as code 3. First, warning as code 3 is not exist in the claim. Second, as previously set forth in the rejection that Bechtel stated that an audio warning circuitry could be incorporated with the strobe unit, in that context, the audio warning circuitry is incorporated with the flashtube warning and the IC is either selects flashtube and/or audio warning.

Regarding appellant argues of dependent claim 14, which comprising a synchronization detection circuit, coupled to said ASIC. As previously, indicated in the rejection that synchronization detection circuit is met by [D1, R15, R17, Q5 and C4] and further cited in col. 11, lines 19-26].

Regarding appellant argues of dependent claim 15, that comprising a transistor drive capability of greater than 7.3 volts. Examiner previously rejection, indicated that a transistor Q5 drive greater than 7.3 volts [see col. 13, lines 5-19], which describes about time that it takes to flash, wherein at 7.6 volts IC triggers the flash.

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Regarding claim 16 appellant argues of claim 16, that Bechtel and Markwell fail to teach an ASIC for selecting an audio frequency of an audio warning signal. As previously presented in the rejection above that, Bechtel stated that warning audio circuitry is incorporated with the strobe unit, in this context, the warning audio circuitry is operated with the flashtube warning and the IC chip is capable of selecting flashtube and/or audio warning at the time, the flash/audio frequency is inherently selecting by the IC, since, the flash is triggered depend on the voltage range. Furthermore, the selecting an audio frequency from a set of a frequency is not claimed in the claim. Therefore, it is obvious of one having ordinary skill in the art to recognize that a selected audio frequency produces audio warning.

For the above reasons, it is believed that the rejections should be sustained.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

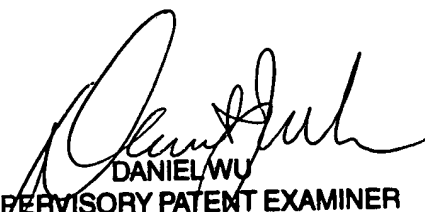
For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,


Son Tang



October 28, 2006



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